



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,535	06/30/2003	Jim Wei	14386	8251
293	7590	03/27/2006	EXAMINER	
Ralph A. Dowell of DOWELL & DOWELL P.C. 2111 Eisenhower Ave Suite 406 Alexandria, VA 22314			KALAFUT, STEPHEN J	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/608,535

Applicant(s)

WEI, JIM

Examiner

Stephen J. Kalafut

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-51 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

Art Unit: 1745

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

1. An apparatus for conducting fluid in a fuel cell comprising a unitary gas-permeable body, a fluid dispersion area defined by a recessed surface, a plurality of spaced apart protrusions protruding from said surface, inlet and outlet conduits and openings.
2. An apparatus according to claim 1, comprising a groove for receiving a seal, further comprising bridge members and specified groove portions.
3. An apparatus according to claim 1, further being flat and also comprising cooling means.
4. An apparatus according to claim 1, further comprising an electric conduit mount, for an electrical conduit extending perpendicular to the above-mentioned recessed surface.
5. A fuel cell system comprising a passageway for cooling water, and comprising a humidifier.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after

Art Unit: 1745

the election, applicant must indicate which are readable upon the elected species. MPEP

§ 809.02(a).

The claims are deemed to correspond to the species listed above in the following manner:

Group 1: 1-22, 27, 33, 37, 39, 47

Group 2: 23-26

Group 3: 28-32, 38, 40-42, 44, 45

Group 4: 34-36, 43, 46

Group 5: 48-51

The following claim(s) are generic: 1.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

The FIRST invention relates to an apparatus for conducting fluid in a fuel cell ("separator plate"), i.e. comprising a unitary gas-impermeable body, a fluid dispersion area formed by a recessed surface being surrounded by a wall, protrusions protruding from said recessed surface and being surrounded thereof and finally comprising inlet opening, inlet conduit, outlet opening and outlet conduit, thereby solving the problem of how to provide a separator plate enabling an even distribution of reactants towards the electrodes.

The SECOND invention relates to the above separator plate, further comprising a groove for receiving a seal, thereby solving the problem of how to securely seal said plate.

The THIRD invention relates to the above separator plate, further comprising cooling means, thereby solving the problem of how to provide both an even reactant distribution and sufficient cooling.

The FOURTH invention relates to the above separator plate and a fuel cell stack comprising such a separator plate, the said separator plate further comprising an electrical conduit mount for mounting an electrical conduit extending perpendicular to the recessed surface of the above separator, thereby solving the problem of how to extract the produced energy therefrom.

The FIFTH invention relates to a fuel cell system comprising a humidifier in fluid communication with a (non-specified) passageway for conducting cooling water, thereby solving the problem of how to drive a cooling passageway with non-utilized water from a humidifier and thus simplifying the supply of water.

The common concept linking together all groups of inventions can be seen in an apparatus for conducting a fluid in a fuel cell, viz. a separator plate in general. Such an apparatus is known *per*

Art Unit: 1745

se (see EP 0924785 and US 2001/0050230, for instance). The common concept linking together the first, second, third and fourth group of invention can be seen in an apparatus for conducting a fluid in a fuel cell as claimed in claim 1, "*i.e.* comprising a (flat) unitary gas-impermeable body, a fluid dispersion area formed by a recessed surface being surrounded by a wall, protrusions protruding from said recessed surface and being surrounded thereof and finally comprising inlet opening, inlet conduit, outlet opening and outlet conduit. Such an apparatus is known in the art, see EP 0924785, figures 2 and 3, and US 2001/0050230, figure 6 and paragraphs [0136] - [0141]. Consequently, as the above-identified common concepts are not new, the application does not satisfy the requirements of unity of invention (Rule 13.1 PCT).

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is 571-272-1286. The examiner can normally be reached on Mon-Fri 8:00 am-4:30 pm.

Art Unit: 1745

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sjk



STEPHEN KALAFUT  
PRIMARY EXAMINER  
GROUP

1700